

Study of electrostatic waves in lower-hybrid frequencies in the lobe region of earth's magnetotail

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We observed a few types of plasma waves in lower hybrid frequency range in the lobe region of the earth's magnetotail. We identify these waves as follows. (1) Waves are observed in the transition region between lobe region to plasma sheet boundary layer. Waves frequencies are lower-hybrid frequency and electric vectors are perpendicular to the local magnetic field. We guess that these waves are lower-hybrid wave excited by the electron beam. (2) Waves are observed in the lobe region. Electric vectors of wave are parallel to the local magnetic field. We guess that these waves are ion acoustic wave.